

REMARKS

Amendment to the Specification

Applicants have amended the specification at paragraph 39 to recite the relationship of the electrodes of the present invention when in use as fully reflected by the Figure. Applicants respectfully request that the Examiner enter the amendment to the specification into the record.

Replacement Drawing Sheets

Applicants have provided herewith replacement drawing sheets in accord with the objections made in the Office action.

Amendment to the Claims

Claims 1-8

Applicants traverse the rejection of claims 1-8. To further the prosecution of this application, however, Applicants have amended claim 1 and have added new claims 20-23 depending either directly or indirectly from amended claim 1. Claim 9 has been amended to place it in independent format. As amended, claims 1-14 and 20-23 are allowable.

Claims 1-4 and 6-8 were rejected as anticipated by U.S. Patent Application 20020099323, now U.S. Patent No. 6,697,669 to Dev et al. Claim 7 was rejected on the combination of Dev et al. and U.S. Patent No. 6,912,417 to Bernard. As will be seen below, Applicants have distinguished the original claim 1 from Dev et al. and in any event have amended the claim to clearly show its allowability.

Dev et al., contrary to the statement in the Office action (“...Dev discloses an apparatus for providing hair removal therapy to the patient.” P.3), provides, according to the abstract, “an in vivo method, using pulsed electric field to deliver therapeutic agents into cells of the skin and muscle for local and systemic treatments.” Dev et al. does not recognize any possibility of use of his apparatus for hair removal. Indeed, since Dev et al. does not recognize such a use, there is no indication in the reference that the Dev et al. generator can be used to produce electric field pulses above the upper electroporation limit for hair follicles, which would be necessary to be able to use this device for hair removal. While Dev et al. could perhaps be speculated to provide such therapy by causing hair follicle death, such a capability is not found in the reference.

Applicants original claim 1 recited an “[a]pparatus for providing hair removal therapy to a patient, ...wherein said generator supplies pulses to said electrodes to create a electroporating field causing hair follicle death.”

As Applicants noted in their application:

[0015] Nevertheless, the survivability of electroporated cells is limited. As the electric field amplitude and/or duration of pulses, increases, this limit, usually referred to as the “upper EP limit” of electroporation, is inevitably achieved. Above the upper EP limit, the number and sizes of pores in the cellular membrane become too large for a cell to survive. ... After application of an electrical pulse above the upper electroporation limit the cell cannot repair itself by any spontaneous or biological process and dies. The upper EP limit is defined by the combinations of the amplitudes of electric field and pulse durations that cause cellular death.

...

[0040] Application of a high voltage electroporation pulse to the electrodes 58 and 60 creates a highly concentrated electric field 62 in the general vicinity of follicle bulb 36. To kill the cells responsible for hair growth, the amplitude of the pulses, that is, the voltage, should be selected to provide an electric field 62 having a strength above the upper electroporation limit for those cells.

Dev et al. contains no such teaching and thus can not anticipate claim 1 nor the claims depending therefrom.

Nevertheless, Applicants have chosen to amend claim 1. As amended, the claim now recites that the generator produces an electric field of such strength and duration that the upper electroporation limit of the hair follicles is exceeded, leading to their death as discussed in the body of the specification. Such a generator is not taught in the Dev et al. reference.

In addition, Applicants have amended claim to recite that the central electrode is capable only of performing an electroporation therapy function and not a drug delivery function as shown in Dev et al. and Bernard.

In addition to the distinctions noted above, Dev et al. discloses the use of a skin-penetrating needle electrode to assist in the uptake of therapeutic agents. The applicants apparatus does not penetrate the skin, but rather simply contacts it.

For all of the reasons shown, Applicants submit that claim 1 as originally filed as particularly as amended, is allowable over the cited and applied art.

Claims 2-8 are allowable as dependent upon an allowable base claim. Applicants have also amended claim to cure a grammatical misstatement.

Claims 9-14

Applicants note that the Examiner has indicated the allowability of claims 9-14 if claim 9 were rewritten in independent format. Applicants have done so here. Claims 9-14 are allowable.

Claims 20-23 (New)

Applicants have added new dependent claims 20-23 to more fully describe the geometric relationship between the electrodes. Claims 20-23 depend directly or indirectly from independent claim 1. Applicants submit claims 20-23 are allowable. Applicants would draw the examiner's attention to Figures 4a and 4b of Dev et al. in considering the allowability of these claims.

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Time Extension

The Office action was mailed March 21, 2006. As such a three month time extension is requested. A credit card charge authorization is included with this filing. In addition, Applicants through their undersigned counsel authorize the Office to charge Deposit Account 502417 for any additional fees and to credit any overpayments thereto.

Conclusion

Claims 1-14 and 20-23 are in proper form for allowance. Applicants respectfully request that the Office issue a Notice of Allowance on the pending claims.

Respectfully Submitted,

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By their attorney

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